

Date: -----

Participant Name or ID # -----

Individual Person Activity-Travel Tracking System
(iPATTTS)

Usability test plan

CS5760

Ali Jalooli

Pre-test questions

Before we begin the experiment, please fill out the following survey. It is worth mentioning that, the information you provide will be kept strictly confidential. Also, note that you have the option to skip any questions you prefer not to answer.

Question 1. Which age group do you belong to?

- 17 and under
- 18 - 22
- 23 - 24
- 25 and older

Question 2. Please select your gender:

- Female
- Male

Question 3. How many years have you used a smart phone?

- Less than 2 years
- 2 – 4 years
- More than 4 years

Question 4. How much experience do you have browsing and/or working on the Internet?

- Less than 1 year
- Between 1 and 3 years
- Between 3 and 5 years
- More than 5 years

Question 5. How many hours per week do you spend on the Internet?

- Less than 5 hours per week
- Between 5 and 10 hours per week
- Between 10 and 20 hours per week
- More than 20 hours per week

Question 6. Please indicate your level of interest in testing this application

- Strongly interested
- Interested
- Neutral
- Not Interested
- Not Interested at all

Test Scenario 1: Create and login to new account

Test Goals for the scenario

The main goal of this test scenario is to determine whether the user can smoothly create and login a new account in iPATTS, the developed application. In other words, we would like to observe that how smoothly can users successfully login to the iPATTS. To do so, the users are asked to open iPATTS from a web browser on a smart phone, create and login to a new account. Besides, the average time required for the users to complete the given tasks can be determined, and possible bugs can be identified.

and log their trip(s). In addition, the users are asked to utilize iPATTS other features such as editing and viewing the added trip(s).

Quantitative measurement list

- The time it takes to create and login to the app.
- Total number of non-fatal user errors. (Recover without any assistances)
- Total number of fatal user errors. (Recover with assistance)
- Total number of the times user asked for help
- Total time required to recover from an error

Scenario description

General info: Before starting the experiment, let me provide with a brief description of the developed application and its main objectives. iPATTS, can collect activity-travel dynamics of an individual person in 24-hours over many days. This application will track individual traveler's daily activity to help us understand travel behavior and forecast travel demand for planning transportation infrastructure systems. To collect such data, each user should open iPATTS from a web browser on his/her smart phone, login to the app and log each trip properly.

At this point, you will be provided with several scenarios. Your job is to act as a user and complete the given tasks appropriately. Please feel free to ask for further clarifications, if required. Also, please speak out loud while you are performing the tasks. This helps us to pursue your actions.

For this task, imagine that you are taking a transportation course offered by the civil engineering department at MTU. The professor gives you an assignment that requires to track and record your trips. The professor provides you with the iPATTS which, helps you can do so. To begin with, you are required to create an account and login to the app.

Task list

- Open iPATTS from a web browser on a smart phone
- Click on “Sign up here” on the home screen
- Enter in the required information
- Create a password and click on “Sign up” button
- Login with the created account

Qualitative measurement list:

Confusion, if any, through facial expression and listening while speaking out loud

Frustration, if any, through facial expression and interests in completing the task

Potential observations of participant

Participant may become confused about buttons due to their size or colors

Participant may face difficulties in reading the texts due to the size of the fonts

Participant may enter incorrect/invalid information (e.g. DoB 2020)

Test Scenario 2: Add a new trip

Test Goals for the scenario

The main goal of this test scenario is to determine whether the user can successfully add a trip in his account. To accomplish this goal, the user is asked to log a tip by going to the trip page of iPATTS.

Quantitative measurement list

- The time it takes to find the appropriate page
- The time required to enter the required information (i.e. Origin, destination, details, etc.).
- Total number of non-fatal user errors. (Recover without any assistances)
- Total number of fatal user errors. (Recover with assistance)
- Total number of the times user asked for help
- Total time required to recover from an error

Scenario description

For this task, imagine that you are taking a short trip from your home to the campus. Please go to the appropriate page “trip page” in the app, once you are in your account, and add your trip properly by entering the required information. Imagine that your class is finished and you would like to go to a friend’s house. Please add this trip to your app. as well!

Task list

- Go to the trip page
- Click on “Add a trip” on the page
- Enter in the required information
- Enter additional information on trip details
- Click on “Save trip” button
- Add another trip by clicking on “Add a trip”, and repeat the mentioned steps

Qualitative measurement list:

Confusion, if any, through facial expression and listening while speaking out loud

Frustration, if any, through facial expression and interests in completing the task

Potential observations of participant

Participant may become confused about buttons due to their size or colors

Participant may face difficulties in reading the texts due to the size of the fonts

Participant may enter incorrect/invalid date (e.g. future time and date 2020)

Test Scenario 3: View and edit the added trip and observe the update

Test Goals for the scenario

The main goal of this test scenario is to determine if the user can smoothly view and edit the trips he/she added earlier. To do so, the user is asked to view the added trips and edit a trip by clicking on the trip. Also, the user is asked to confirm that the trip information has been changed after he edited it.

Quantitative measurement list

- The time it takes to find the appropriate page to view the trips
- The time required to reread and edit the information
- The time required to confirm the changes
- Total number of non-fatal user errors. (Recover without any assistances)
- Total number of fatal user errors. (Recover with assistance)
- Total number of the times user asked for help
- Total time required to recover from an error

Scenario description

From “viewing trip” page where you can observe your added trips, you realize that you accidentally entered a wrong information. In this case, imagine that you selected “School” for the purpose of your trip while you were going to “work”. Therefore, you would like to edit the trip information. To do so, you may click on the added trip and edit it as desired. Once edited, you may re-check to see if your trip has been updated.

Task list

- Go to the viewing trip page
- Click on the trip that needs to be edited
- Re-enter the information
- Click on “Save trip” button
- Go to viewing trip page to confirm that the trip has been updated

Qualitative measurement list:

Confusion, if any, through facial expression and listening while speaking out loud

Frustration, if any, through facial expression and interests in completing the task

Potential observations of participant

Participant may become confused about buttons due to their size or colors

Participant may face difficulties in reading the texts due to the size of the fonts

Participant may enter incorrect/invalid date (e.g. 2020)

Bug Report Form

| Bug Number | Bug Name | Bug Uniqueness | Bug location | Bug description |
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Post Scenario interview or questionnaire questions:

1. Please indicate your level of agreement to the follow statement:

Overall, this application was easy to perform the task.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

2. Please indicate your level of agreement to the follow statement:

I enjoy using this application.

1. Very much
2. A little bit
3. Neutral
4. Not very much
5. Not at all

3. Please indicate your level of agreement to the follow statement:

I would use this application again.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

4. Please indicate the degree of difficulty in each scenario:

| | Very easy | Easy | Normal | Hard | Very hard |
|------------|-----------|------|--------|------|-----------|
| Scenario 1 | | | | | |
| Scenario 2 | | | | | |
| Scenario 3 | | | | | |

5. Which scenario or task, if any, was confusing? Please describe your answer.

Consent Form

Computer User Interface Usability Testing

You are being invited to participate in a research study to determine the usefulness and usability of computer user interfaces. This study is being conducted by Dr. Robert Pastel of Michigan Technological University Computer Science Department and students in Dr. Pastel's Human-Computer Interaction (HCI) courses. The students are performing the usability tests as part of their project and to fulfill the HCI course requirements.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you provide and tasks that you will perform will determine the usefulness and usability of user interfaces. The questionnaires and the tasks should take less than an hour to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

The questionnaires and test are anonymous. Do not write your name on the survey. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study except for the instructor of the class that is giving you credit for participating. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary. By completing the questionnaires and performing the tasks, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer or not to perform a task for any reason.

If you have any questions about the study, please contact Dr. Robert Pastel, Assistant Professor, Computer Science Department, Michigan Technological University, Houghton, MI 49931.

The MTU Institutional Review Board has reviewed my request to conduct this project. If you have any concerns about your rights in this study, please contact Joanne Polzien of the MTU-IRB at 906-487-2902 or email jpolzien@mtu.edu.

Participant signature and date: